

Telecommunications Engineer Series

California State Personnel Board Specification

Series established December 20, 1972

Scope

This class series describes four levels in the telecommunication engineering field with responsibility for the design, installation, maintenance and operation of statewide telecommunication systems, including telecommunication engineering surveys and studies. Positions are responsible for providing technical advice to client agencies on electromagnetic and land wire communication requirements such as telephone, television, teletype, data, mobile and microwave radio systems; recommend new systems or changes in existing communications systems to achieve greater economy, efficiency and eliminate obsolescence; implement technical statewide coordination of communication equipment including preparation of specifications and construction and maintenance standards; instruct and train maintenance personnel, make evaluation studies; recommend coordinated use of facilities on a shared basis between State departments and make recommendations on equipment inventories; instruct operating personnel of State agencies in matter pertaining to all phases of telecommunication systems.

Entry Level

Entry into this series typically will be through the class of Junior Electrical Engineer.

Factors Affecting Position Allocation

Factors affecting position allocation include level, variety, and complexity of work, independence of action and decision-making responsibility, supervision received, and for the higher levels, degree of supervisory responsibilities and independent program responsibilities.

Schem Code	Class Code	Class
HK95	3643	Assistant Telecommunications Engineer
HK85	3640	Associate Telecommunications Engineer
HK75	3637	Senior Telecommunications Engineer
HK67	3636	Supervising Telecommunications Engineer

Telecommunications Engineer Series Specification - Class Titles and Codes

Definition of Levels

Assistant Telecommunications Engineer

This is the lower level of journeyman in this series. Under supervision, incumbents perform engineering work of average difficulty and assist in making telecommunications engineering surveys and studies.

Associate Telecommunications Engineer

This is the full journeyman professional level engineer in the series. Under direction, incumbents perform difficult telecommunications engineering work or act as leadpersons over subordinate staff members in connection with design, installation, maintenance and operation of statewide telecommunications systems; and independently make or supervise telecommunication engineering surveys and studies.

Senior Telecommunications Engineer

This is the first supervisory level of the series. Under general direction, incumbents plan and direct the work of a staff in an assigned program area; or as a nonsupervisor, make telecommunication engineering surveys and studies of major statewide importance.

Supervising Telecommunications Engineer

This is the second level supervisor and program manager level of the series; under general direction of the Division Chief, incumbents plan, organize and direct the work of major program area. This level is responsible for work of the highest level technical and professional engineering expertise performed in the division. As assigned, incumbents represent the division on departmental, agency or interagency committees or task forces. When assigned, incumbents act for the Chief in his/her absence.

Minimum Qualifications

All Levels:

Education: Candidates applying under non-State requirements must meet the following education requirements: Equivalent to graduation from college with major work in electrical, electronic, or communications engineering. (Additional qualifying experience may be substituted for the required education on a year-for-year basis.) (A Master's Degree in Electrical Engineering with specialization in electronics or communications may be substituted for the required experience for Assistant Telecommunications Engineer. Applicants who are pursuing graduate work toward a master's degree will be admitted to the examination, but they must receive the degree before they will be considered for appointment.)

Assistant Telecommunications Engineer

EITHER I

One year of experience in the California state service performing the duties of a Junior Electrical Engineer in the telecommunications field.

OR II

Two years of electrical engineering experience, one year of which shall have been in the telecommunications field.

Associate Telecommunications Engineer

EITHER I

Two years of experience performing the duties of an Assistant Telecommunications Engineer.

OR II

Three years of engineering experience in the field of telecommunications which must have included two years in design and construction, or maintenance of radio communications systems or wire communications systems.

Senior Telecommunications Engineer

EITHER I

Two years of experience performing the duties of an Associate Telecommunications Engineer.

OR II

Five years of engineering experience in the field of telecommunications which must have included three years in the design, construction, or maintenance of radio communications systems or wire communications systems.

Supervising Telecommunications Engineer

EITHER I

Two years of experience performing the duties of a Senior Telecommunications Engineer.

OR II

Broad and extensive experience (more than five years) in telecommunications planning and design, at least two years of which shall have involved the supervision of subordinates in the design, construction, operation or maintenance of major telecommunications systems.

Knowledge and Abilities

All Levels:

Knowledge of: Electronics theory; engineering mathematics; principles, practices, methods, terminology and trends in wire communication systems engineering and mobile and microwave radio communications engineering including the fields of radio frequency allocations, electromagnetic wave propagation, radio field strength measurements and tolerances; theory and operation of telephone, data telegraph and teletype systems; engineering economics; Federal Communications Commission rules and regulations; traffic handling procedures; California State Communications Law and the Federal Communications Act of 1934.

Ability to: Perform radio and electronic research projects; prepare engineering reports and surveys; design; write specifications and make final engineering recommendations on various radio and wire communications systems; analyze technical data; establish and maintain cooperative relations with those contacted in the work; interpret and apply provisions of the California State Communications Act and the Federal Communications Act of 1934; apply knowledge of wire communications systems to the communications problems of State agencies; secure a valid second class or higher radio-telephone operator license issued by the Federal Communications Commission when such license is or will be necessary for performance of the assigned work.

Senior Telecommunications Engineer

Supervising Telecommunications Engineer

Knowledge of: Principles of personnel management and supervision; procedures used in hearings before regulatory bodies, methods of organization; and principles of budgeting; department's Affirmative Action Program objectives; a manager's role in the Affirmative Action Program and the processes available to meet affirmative action objectives.

Ability to: Plan, organize and direct the work of a group of telecommunications engineers; effectively contribute to the department's affirmative action objectives.

Special Personal Characteristics

All Levels:

Willingness to travel throughout the State; tact, and reliability.

Class History

Class	Date Established	Date Revised	Title Changed
Assistant Telecommunications Engineer	12/20/1972	--	--
Associate Telecommunications Engineer	12/20/1972	--	--
Senior Telecommunications Engineer	12/20/1972	--	--
Supervising Telecommunications Engineer	12/20/1972	--	--
Telecommunications Engineer Series History - Dates Established, Revised, and Title Changed			

Updated 6/3/2012